GC SUPPLIES UK LTD

Installation, Operating and Maintenance Instructions:

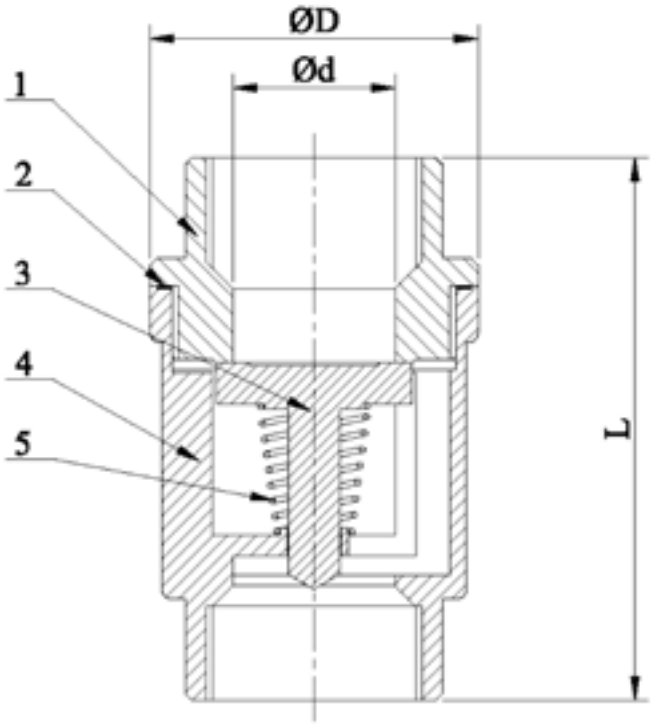
ETG-SPV-69S
High Temperature Screwed Barrel
Spring Check Valve

Contents

Valve Information

ETG SPV-69S

High Temperature Screwed Barrel Spring Check Valve



Item	Part	Material	Qty.
1	Cap	CF8M	1
2	Body Gasket	PPL	1
3	Disc	CF8M	1
4	Body	CF8M	1
5	Spring	SS316	1

SIZE	d	D	L	Kgs
1/2”	15	37	56	0.21
3/4”	20	42	63	0.29
1”	25	48	74	0.4
1-1/4”	30	58	81	0.65
1-1/2”	38	70	91	0.98
2”	47	82	97	1.4

SIZE	Cracking Pressure mbar	Cv	Kv
1/2”	22-30	5.7	4.9
3/4”	22-30	10.3	8.8
1”	22-30	13.11	11.2
1-1/4”	24-32	24.2	20.7
1-1/2”	24-32	33.8	29
2”	24-32	46.7	40

Please note that no alternative spring ranges are available for this model of Check Value

- Screwed Barrel Type Spring Check Valve.
- ASTM A351 CF8M 316 Stainless Steel construction.
- 316 Stainless Steel Spring.
- 2-Pce screw together body construction.
- PPL Body Seal, Metal Seat.
- 69 bar (1000 psi) pressure rated.
- -25 / +260 deg C Temp rated.
- BSP Screwed end connections to ISO 7/1 Rp.
- CE marked in accordance with PED 2014/68/EU (from 1.1/4”).

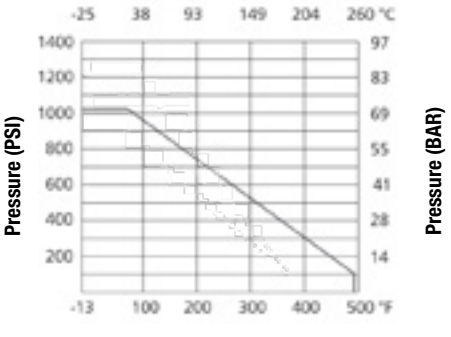
The valve offers substantial advantages over other spring check valves available in the market place, especially where elevated temperatures are involved such as steam and thermal fluid applications.

The 2-pce body construction allows the valve to be maintained.

We are able to offer full material certification to EN 10204 3.1.

Available size range: 1/2” - 2”

Pressure-Temp. Rating



Introduction

G.C. Supplies offers a wide range of valves, designed and assembled to handle and drive fluids in industrial procedures.

The compatibility of materials used to build the valves (see technical specifications) and the application of valves to the different industrial processes is at the user's risk. Valves will have an optimal behaviour when working conditions do not exceed the recommended pressure and temperature limits for which they have been designed.

Transport and Storage Conditions

Visual Inspection

It is important to conduct a visual inspection to check for any damage on the product that could have occurred during transport, unloading or placement. If you notice any kind of anomaly upon receiving the goods, please contact GC Supplies in order to resolve the issue.

Storage

During storage it is recommended to keep valves in a dry and clean environment within the included protective wrapping to avoid damage or dirt accumulation. The protective wrap should not be removed until the valve is ready to be installed.

Before installing and/or manipulating these elements, read these instructions carefully. If you fail to understand any of their content, please contact G.C. Supplies.

Installation Instructions

Preparation

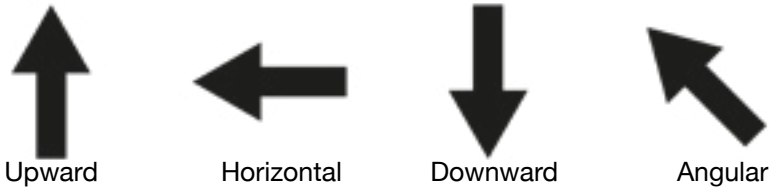
Firstly, separate the valve from the valve wrapping. Serious problems may arise with the installation of a valve into an unclean pipe, make sure the pipe is not dirty before installing it.

Check the valve is operating correctly by pushing the disc (refer to the diagram) in the direction of the flow and ensuring it goes back to the original position once it's released. If this is not the case, check if there are any foreign particles inside the valve and repeat until desired outcome is achieved. If the disc does not move smoothly, the valve must not be installed.

It is strongly recommended to mount anti-vibration elements to absorb any potential vibrations that may damage and reduce the life cycle of the valve.

Assembling

Spring check valves can be installed in any position, but the flow direction of the valve marked by an arrow on the body must be taken into account.



In case you need to install the valve without the spring, the valve should only be placed in vertical position (upward flow).

- Do not dismantle these valves in order to install them
- Ensure that the pipe and valve threaded end are clean and that they are compatible
- Apply a suitable sealant on the pipe threaded end and fasten the valve to the connecting pipe, taking care not to over tighten the tapered threads
- Do not perform any welding when the valve has been assembled in case the valve becomes damaged by overheating
- We recommend fastening the valve to the pipe using an open-ended or an adjustable spanner and by only applying force on the hexagonal area of the valve ends. It is recommended that the force applied is lower than 30 Nm
- The valve must never be assembled adjoining an elbow, reducer, valve or pump to avoid any issues. The minimum distance recommended between these elements is 10 times the pipe diameter (upstream) and 3 times de pipe diameter (downstream), according to CR 13932:2000

Operating Instructions

Usage

Check valves are mainly used to prevent any back-flow in the system. Soft-seated valves provide a tight seal when used in accordance with the pressure / temperature values for which they have been designed. The material from which the valve body and the rest of components are made must be compatible with the fluid circulating through the valve; otherwise, the valve may become seriously damaged.

Operation

By default, this kind of valve does not need to be operated. Opening and closing are automatic, depending on pressure and direction of the flow. For more information about the minimum opening pressure of the valve, please refer to the valve information stated previously in the document.

Maintenance Instructions

Check valves with a metal sealing are designed so that they do not need any lubrication and/or periodical maintenance during their life cycle. However, periodical checks will be useful to extend the service life of the valve and reduce installation problems:

- Keep the valve in a completely closed position.
- Verify all threads, locks, fasteners and threaded ends to check if they are loose or rusted. Tighten them if necessary.
- Inspect the valve and surrounding areas to verify if there is any leakage.

Reparation Instructions

If fluid continues to circulate through the line once the valve is completely closed, the leakage may be caused by damage on the sealing surface or by an excessive erosion on the spring after many operational cycles. In both cases it will be necessary to disassemble the valve for repairing it.

However, for example it may be the case that, in an area difficult to access, it is more economically viable to directly replace the valve instead of repairing it.

Disassembling

You must remove the valve from the installation to repair it.

Make sure the line is cold, drained and depressurised.

Prepare a clean working area and adequate tools to perform mechanical tasks.

a) Place the valve on a suitable vice, holding it by its body

b) Slowly unscrew the Cap until removed

c) Remove the Disc, the Spring and the Gasket with your fingers

d) Unfasten the Screw until the Seat is released

Reassembling

Before proceeding to reassemble the valve, make sure that reparation kit and/or pieces to be used are appropriate. When it is reassembled, maintaining cleanliness is essential for a long life cycle.

a) Clean the sealing area inside the body and replace damaged or worn out pieces.

b) Place the Disc and Spring back in its working position, making sure to check if it has sustained any damage during disassembling process. Then assemble the Seat

c) Finally, install a new Gasket in the Body's groove and fasten the Cap, taking care not to move the gasket from its position

d) Install the valve on the pipe again. See Installation Instructions for more information.

Opening Pressure

The Disc Check Valve has been designed to work with minimal operational pressures (for more details, please consult the technical specifications in the valve information).

Hygiene and Safety

The fluids that go through the valve can be corrosive, toxic, flammable or pollutant. They can also be found at very high or low temperatures. When operating valves, you must follow the operation instructions.

It is recommended that you:

- Protect your eyes.
- Wear gloves and appropriate working clothes.
- Wear safety footwear.
- Wear a helmet.
- Have running water to hand.
- Have an extinguisher to hand when work with flammable fluids.

Before removing a valve from a pipe, check always if the line is completely cold, drained and depressurised.

Any type of repair or maintenance should be performed in a well ventilated area.